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Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-15 (cancelled)

16. (Currently Amended) A display device comprising an array of light emitting display elements (2) arranged in rows and columns, with a plurality of [[the]] pixels in a column being supplied with current from a respective column power supply line (26) and the pixels being addressed row by row, the addressing of all rows defining a field period, the device further comprising:

compensation circuitry for modifying target pixel drive currents corresponding to desired pixel brightness levels, to take account of the voltage on the column power supply line at each pixel resulting from the currents drawn from the column power supply line by the plurality of pixels in the column being supplied by the column power supply line for each row addressing cycle in a field period and the dependency of [[the]] pixel brightness characteristics on [[the]] a voltage on [[the]] a row conductor at the pixel.

17. (Currently Amended) A device as claimed in claim 16, wherein the compensation circuitry comprises: means for applying an algorithm to the target pixel drive currents which represents [[the]] a relationship between the currents drawn by the plurality of pixels in a column and the voltages on the column power supply line at the locations of the pixels and the dependency of the pixel brightness characteristics on the voltage on the row conductor.

18. (Currently Amended) A device as claimed in claim 17, wherein the means for applying an algorithm derives values corresponding to multiplying a vector of the target pixel drive currents for a column of pixels by the inversion of [[the]] a matrix **M**, in which:

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$$
\mathbf{M} = \begin{bmatrix}
-2 & 1 & & & & \\
1 & -2 & 1 & & & \\
& & \ddots & \ddots & \ddots & \\
& & & 1 & -2 & 1 \\
& & & & 1 & -2
\end{bmatrix},
$$

and wherein the number of rows and columns of matrix **M** is equal to the number of pixels in the column.

19. (Currently Amended) A device as claimed in claim 17, wherein each <u>of the plurality of pixels in a column</u> [[pixel]] comprises a current sampling transistor (34) which samples an input current and provides a drive voltage to a drive transistor (22), and wherein the algorithm uses a value including terms derived from:

the voltage-current characteristics of the drive transistor (22); and

the voltage-current characteristics of the light emitting display element (2).

20. (Currently Amended) A device as claimed in claim 19, wherein the drive transistor (22) and the light emitting display element (2) of each <u>of the plurality of pixels in a column</u> [[pixel]] are in series between the column power supply line (26) and a common line.

21. (Currently Amended) A device as claimed in claim 17, wherein the algorithm uses a value including a term (R) derived from [[the]] <u>a</u> resistance of the column power supply line (26).

22. (Original) A device as claimed in claim 21, wherein the algorithm uses a value $R\lambda/(1+\lambda/\mu)$, where

R is the resistance of the column power supply line between adjacent pixels;

λ is the slope of the drain-source current vs. drain-source voltage curve of the drive transistor; and

μ is the slope of the current vs. voltage curve of the display element.

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23. (Currently Amended) A device as claimed in claim 22, wherein the value $R\lambda/(1+\lambda/\mu)$ uses the slope of the drain-source current vs. drain-source voltage curve of the drive transistor and the slope of the current vs. voltage curve of the display element at [[the]] a target pixel drive current.

24. (Currently Amended) A device as claimed in claims 18, wherein the means for applying an algorithm derives values by a recursive operation

$$F(c,n) = F(c,n-1) + \sum_{j=0}^{n-1} I_{av}(c,j) + F(c,0)$$

in which:

F(c,n) is the nth term of the vector result of multiplying the vector of [[the]] target pixel drive currents for the cth column of pixels by the inversion of the matrix **M**, F(c, 0) being the first term; and

I(c,j) is [[the]] a target pixel drive current for the jth pixel in the cth column, the first pixel being j=0.

25. (Original) A device as claimed in claim 24, wherein:

$$F(c,0) = \frac{-1}{N+1} \sum_{j=0}^{N-1} (N-j)I_{av}(c,j),$$

in which:

N is the total number pixels in the column.

26. (Previously Presented)   A device as claimed in claim 17, wherein the means for applying an algorithm comprises a look up table (102).

27. (Original) A device as claimed in claim 26, further comprising at least one pixel compensation module (110,112,114), and further comprising means for updating the values of the look up table to enable changes in pixel brightness characteristics over time to be modeled based on analysis of the characteristics of the pixel compensation module.

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28. (Currently Amended) A circuit for generating pixel drive currents for the display elements of a light emitting display device having display elements arranged in rows and columns, with a plurality of [[the]] pixels in a column being supplied with current from a respective column power supply line (26) and the plurality of pixels being addressed row by row, the addressing of all rows defining a field period, the circuit comprising:

means for receiving target pixel drive currents;

compensation circuitry for modifying [[the]] target pixel drive currents to take account of the voltage on the column power supply line at each of the plurality of pixels in the column [[pixel]] resulting from the currents drawn from the column power supply line by the plurality of pixels in the column for each row addressing cycle in a field period and the dependency of [[the]] pixel brightness characteristics on the voltage on [[the]] a row conductor at the pixel.

29. (Original) A circuit as claimed in claim 28, wherein the compensation circuitry comprises:

means for applying an algorithm to the target pixel drive currents which represents [[the]] a relationship between the currents drawn by the pixels in a column and [[the]] voltages on the column power supply line at the locations of the pixels in the column and the dependency of the pixel brightness characteristics on the voltage on the row conductor.

30. (Currently Amended) A circuit as claimed in claim 29, wherein the means for applying an algorithm derives values corresponding to multiplying a vector of [[the]] target pixel drive currents for a column of pixels by the inversion of [[the]] a matrix $\mathbf{M}$, in which:

$$\mathbf{M} = \begin{bmatrix} -2 & 1 & & & \\ 1 & -2 & 1 & & \\ & \ddots & \ddots & \ddots & \\ & & 1 & -2 & 1 \\ & & & 1 & -2 \end{bmatrix},$$

and wherein the number of rows and columns of matrix $\mathbf{M}$ is equal to the number of pixels in the column.

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31. (Original) A circuit as claimed in claim 30, wherein the algorithm uses a value including a term (R) derived from the resistance of the column power supply line (26).

32. (Currently Amended) A circuit as claimed in claim 30, wherein the means for applying an algorithm derives values by a recursive operation

$$F(c,n) = F(c,n-1) + \sum_{j=0}^{n-1} I_{av}(c,j) + F(c,0)$$

in which:

F(c,n) is the nth term of the vector result of multiplying the vector of [[the]] target pixel drive currents for the cth column of pixels by the inversion of the matrix **M**, F(c, 0) being the first term; and

I(c,j) is [[the]] a̲ target current for the jth pixel in the cth column, the first pixel being j=0.